

**Drawings (Examiner's paragraph 1)**

Examiner's objection per MPEP 608.02(g) is acknowledged and suitable replacement sheets for Figs. 1 and 2 are submitted herewith.

**Cancelled and New Claims**

Apparatus claims 1-7 are cancelled hereby as several defects have been noted during the prosecution of this application in Europe. These defects include an unintentional broadening by dependent claims and lack of clarity. The new claims 12-15 presented herewith in accordance with 37 CFR 1.121 address these issues as well as the issues raised by Examiner Merlino.

**Claim Objections****Reference marks (2-4)**

Claims 1-7 cancelled in this response are replaced with new claims 12-15. Remaining claims 8 and 11 have been amended to place reference marks in parentheses.

**Informalities (5)**

Subparagraphs a, b, and c of paragraph 5 of the Examiner's action are no longer relevant as claims 1 and 6 are cancelled herewith.

Claim 10 has been amended per the Examiner's suggestion.

**Claim Rejections****Rejection under 35 USC 112 (6 and 7)**

Claim 4 which contained the indefinite term "similar" has been cancelled.

**Double Patenting**

Applicant respectfully disagrees with the Examiner regarding nonstatutory obviousness-type double patenting. Examiner has cited Applicants U. S. Patent No. 6,975,392 and Application No. 10/961,633, now U. S. Patent No. 7,027,138, as rendering the present application obvious. In addition, Examiner states that the claims in 6,975,392 "...are not patently distinct [over those of the present application]... because both teach of a refractometer comprising [etc.]...; the only difference being that the claims in 6,975,392 do not claim a mirror means...." Although Claims 1 through 7 have been cancelled, nevertheless, the Examiner's statement does not reflect the actual inventive elements, as may be seen immediately from Fig. 3 of the present application wherein is shown the distinct structural differences therebetween permitting the present invention to determine the absolute refractive index of the reference solution *in addition to* the differential

refractive index as determined by the prior structure. This measurement cannot be performed by the structures and implementations of U. S. Patent Nos. 6,975,392 or 7,027,138. This entirely new concept has never been incorporated previously into any differential refractometer and represents the basis of the present non-obvious departure from the previously cited inventions. A variety of scientific measurements, such as light scattering measurements performed the molar mass of critically important pharmaceuticals, require an *a priori* knowledge of the differential refractive index increment,  $dn/dc$ , in addition to the refractive index of the carrier fluids employed in such measurements. The ability of a single instrument capable of measuring both quantities has been long-awaited and well received in the marketplace. Indeed, the even secondary considerations "reduction to practice" of the present invention and its "commercial success" must be considered further by the Examiner in defeating the obviousness rejections. (Cf. 35 USC 103)

Regarding reference by the Examiner to U. S. Patent No. 7,027,138 (via reference to then-pending Application No. 10/961,633), the Examiner states that "...at the time of the invention [7,027,138], it would have been obvious to one of ordinary skill in the art to derive the equations using basic geometry." The structure incorporating the geometrical elements of the present invention is both *different and distinct* from that of U. S. Patent No. 7,027,138 and, therefore, could not have been derived from the geometry thereof. The equations of claims 8 – 11 include reference to angles not found in the structures of U. S. Patent No. 7,027,138 and are, therefore, both distinct and newly introduced through means of the new invention as disclosed in the present application.

#### **Request for allowance**

Applicant respectfully requests that the application with claims as amended herewith be approved and allowed to issue.

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#### **Enclosures:**

- 1) Information Disclosure Statement and related reference
- 2) Replacement sheets for Figs. 1 & 2
- 3) Complete listing of claims